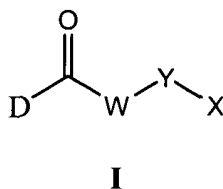


We claim:

1. A compound comprising a drug attached to an organic chain via a nucleophile present on the drug, wherein the organic chain has, at the end distal to the drug, an organic group susceptible to enzymatic cleavage and substantially unsusceptible to non-enzymatic cleavage.
2. The compound of claim 1, wherein the distal organic group is an amide.
3. The compound of claim 1, wherein the nucleophile and the organic chain form an ester.
4. The compound of claim 3, wherein the ester is cleaved via an intramolecular reaction after enzymatic cleavage of the distal organic group.
5. The compound of claim 4, wherein the distal organic group is an amide.
6. The compound of claim 1, wherein the drug is a pain relief drug.
7. The compound of claim 1, wherein the drug is alphacetylmethadol hydrochloride, anileridine, apomorphine, bemidone, betacetylmethadol hydrochloride, buprenorphine hydrochloride, butorphanol tartrate, codeine, dezocine, dihydrocodeine, dihydromorphine, dipanone hydrochloride, eptazocine hydrobromide, ethylmorphine, etorphine hydrochloride, hydromorphone, ketobemidone, levorphanol tartrate, loperamide, meptazinol hydrochloride, methyldihydromorphinone, nalbuphine hydrochloride, nalbuphine hydrochloride, normorphine, oxycodone, oxymorphone, pentazocine, piminodine, tramadol, allobarbitone, alprazolan, amylobarbitone, barbitone sodium, butobarbitone, captodiamine hydrochloride, chloral betaine, chloral hydrate, chloralose, chlorhexadol, chlormethiazole edisylate, cinolazepam, potassium clorazepate, cyclobarbitone calcium, delorzepam, difebarbamate, enciprazine hydrochloride, flunitrazepam, hexobarbitone sodium, ibomal, lorazepam, lormetazepam, meprobamate, methylpentynol, midazolam maleate, oxazepam, pentobarbitone calcium, phenprobamate, proxibarbal, quinalbarbitone, quinalbarbitone sodium, secbutobarbitone sodium, temazepam, triclofos sodium, zalepan, or zolazepam hydrochloride.
8. The compound of claim 1, wherein the drug is oxycodone.

9. A pharmaceutical composition, comprising the compound of claim 1; and a pharmaceutically acceptable excipient.
10. A method of treating pain in a mammal, comprising administering to a mammal in need thereof a therapeutically effective amount of the compound of claim 6.
11. The method of claim 10, wherein the mammal is a primate, equine, canine, or feline.
12. The method of claim 10, wherein the mammal is a human.
13. A method of making a drug more difficult to abuse, comprising bonding an organic radical to the drug at one end of the organic radical via a nucleophile on the drug, wherein said organic radical comprises a functional group that is susceptible to enzymatic cleavage and substantially unsusceptible to non-enzymatic cleavage.
14. A kit comprising the compound of claim 1 and instructions for use thereof.
15. A compound of formula I:



wherein

D is a drug radical;

W is an organic chain comprising 3-5 carbon atoms that are substituted or unsubstituted and optionally comprises 3-5 heavy atoms selected from the group consisting of O, S, N, Si, and P;

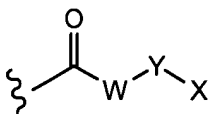
Y is NH, S, or O; and

X is -CO-alkyl, -CO-aryl, -CO-aralkyl, -CO-heteroaryl, -CO-heteroaralkyl, -CO₂-alkyl, -CO₂-aryl, -CO-NHalkyl, -CO-NHaryl, the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.

16. The compound of claim 15, wherein D is a radical of a pain relief drug.

17. The compound of claim 15, wherein D is a radical of alphacetylmethadol hydrochloride, anileridine, apomorphine, bemidone, betacetylmethadol hydrochloride, buprenorphine hydrochloride, butorphanol tartrate, codeine, dezocine, dihydrocodeine, dihydromorphine, dipanone hydrochloride, eptazocine hydrobromide, ethylmorphine, etorphine hydrochloride, hydromorphone, ketobemidone, levorphanol tartrate, loperamide, meptazinol hydrochloride, methyldihydromorphinone, nalbuphine hydrochloride, nalbuphine hydrochloride, normorphine, oxycodone, oxymorphone, pentazocine, piminodine, tramadol, allobarbitone, alprazolan, amylobarbitone, barbitone sodium, butobarbitone, captodiamine hydrochloride, chloral betaine, chloral hydrate, chloralose, chlorhexadol, chlormethiazole edisylate, cinolazepam, potassium clorazepate, cyclobarbitone calcium, delorazepam, difebarbamate, enciprazine hydrochloride, flunitrazepam, hexobarbitone sodium, ibomal, lorazepam, lormetazepam, meprobamate, methylpentynol, midazolam maleate, oxazepam, pentobarbitone calcium, phenprobamate, proxibarbal, quinalbarbitone, quinalbarbitone sodium, secbutobarbitone sodium, temazepam, triclofos sodium, zalepan, or zolazepam hydrochloride.
18. The compound of claim 15, wherein D is a radical of oxycodone.
19. The compound of claim 15, wherein W is $-\text{CH}_2\text{CH}_2\text{CH}_2-$ or $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$.
20. The compound of claim 15, wherein Y is NH.
21. The compound of claim 15, wherein X is $-\text{CO-alkyl}$ or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
22. The compound of claim 15, wherein D is a radical of oxycodone and W is $-\text{CH}_2\text{CH}_2\text{CH}_2-$ or $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$.
23. The compound of claim 15, wherein D is a radical of oxycodone and Y is NH.
24. The compound of claim 15, wherein D is a radical of oxycodone and X is $-\text{CO-alkyl}$ or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
25. The compound of claim 15, wherein W is $-\text{CH}_2\text{CH}_2\text{CH}_2-$ or $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$; and Y is NH.

26. The compound of claim 15, wherein W is -CH₂CH₂CH₂- or -CH₂CH₂CH₂CH₂-; and X is -CO-alkyl or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
27. The compound of claim 15, wherein Y is NH and X is -CO-alkyl or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
28. The compound of claim 15, wherein D is a radical of oxycodone, W is -CH₂CH₂CH₂- or -CH₂CH₂CH₂CH₂-, and Y is NH.
29. The compound of claim 15, wherein D is a radical of oxycodone, W is -CH₂CH₂CH₂- or -CH₂CH₂CH₂CH₂-, and X is -CO-alkyl or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
30. The compound of claim 15, wherein D is a radical of oxycodone, Y is NH, and X is -CO-alkyl or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
31. The compound of claim 15, wherein W is -CH₂CH₂CH₂- or -CH₂CH₂CH₂CH₂-, Y is NH, and X is -CO-alkyl or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
32. The compound of claim 15, wherein D is a radical of oxycodone, W is -CH₂CH₂CH₂- or -CH₂CH₂CH₂CH₂-, Y is NH, and X is -CO-alkyl or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
33. A pharmaceutical composition, comprising the compound of claim 15; and a pharmaceutically acceptable excipient.
34. A kit comprising the compound of claim 15 and instructions for use thereof.
35. A method of treating pain in a mammal, comprising administering to a mammal in need thereof a therapeutically effective amount of the compound of claim 16.
36. The method of claim 35, wherein the mammal is a primate, equine, canine or feline.
37. The method of claim 35, wherein the mammal is a human.
38. A method of making a drug more difficult to abuse, comprising bonding to a nucleophile on the drug a radical of formula II:



II

wherein

W is an organic chain comprising 3-5 carbon atoms that are substituted or unsubstituted and optionally comprises 3-5 heavy atoms selected from the group consisting of O, S, N, Si, and P;

Y is NH, S, or O; and

X is -CO-alkyl, -CO-aryl, -CO-aralkyl, -CO-heteroaryl, -CO-heteroaralkyl, -CO₂-alkyl, -CO₂-aryl, -CO-NHalkyl, -CO-NHaryl, the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.

39. The method of claim 38, wherein the drug is a pain relief drug.
40. The method of claim 38, wherein the drug is alphacetylmethadol hydrochloride, anileridine, apomorphine, bemidone, betacetylmethadol hydrochloride, buprenorphine hydrochloride, butorphanol tartrate, codeine, dezocine, dihydrocodeine, dihydromorphine, dipanone hydrochloride, eptazocine hydrobromide, ethylmorphine, etorphine hydrochloride, hydromorphone, ketobemidone, levorphanol tartrate, loperamide, meptazinol hydrochloride, methyl dihydromorphinone, nalbuphine hydrochloride, nalbuphine hydrochloride, normorphine, oxycodone, oxymorphone, pentazocine, piminodine, tramadol, allobarbitone, alprazolam, amylobarbitone, barbitone sodium, butobarbitone, captodiamine hydrochloride, chloral betaine, chloral hydrate, chloralose, chlorhexadol, chlormethiazole edisylate, cinolazepam, potassium clorazepate, cyclobarbitone calcium, delorzepam, difebarbamate, enciprazine hydrochloride, flunitrazepam, hexobarbitone sodium, ibomal, lorazepam, lormetazepam, meprobamate, methylpentynol, midazolam maleate, oxazepam, pentobarbitone calcium, phenprobamate, proxibarbal, quinalbarbitone, quinalbarbitone sodium, secbutobarbitone sodium, temazepam, triclofos sodium, zalepan, or zolazepam hydrochloride.
41. The method of claim 38, wherein the drug is oxycodone.

42. The method of claim 38, wherein W is $-\text{CH}_2\text{CH}_2\text{CH}_2-$ or $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$.
43. The method of claim 38, wherein Y is NH.
44. The method of claim 38, wherein X is $-\text{CO-alkyl}$ or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
45. The method of claim 38, wherein the drug is oxycodone; and W is $-\text{CH}_2\text{CH}_2\text{CH}_2-$ or $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$.
46. The method of claim 38, wherein the drug is oxycodone; and Y is NH.
47. The method of claim 38, wherein the drug is oxycodone; and X is $-\text{CO-alkyl}$ or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
48. The method of claim 38, wherein Y is NH; and X is $-\text{CO-alkyl}$ or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
49. The method of claim 38, wherein the drug is oxycodone, W is $-\text{CH}_2\text{CH}_2\text{CH}_2-$ or $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$, and Y is NH.
50. The method of claim 38, wherein the drug is oxycodone, W is $-\text{CH}_2\text{CH}_2\text{CH}_2-$ or $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$, and X is $-\text{CO-alkyl}$ or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
51. The method of claim 38, wherein the drug is oxycodone, Y is NH, and X is $-\text{CO-alkyl}$ or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
52. The method of claim 38, wherein W is $-\text{CH}_2\text{CH}_2\text{CH}_2-$ or $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$, Y is NH, and X is $-\text{CO-alkyl}$ or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.
53. The method of claim 38, wherein the drug is oxycodone, W is $-\text{CH}_2\text{CH}_2\text{CH}_2-$ or $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$, Y is NH, and X is $-\text{CO-alkyl}$ or the carboxy terminus of an N-acyl amino acid or the carboxy terminus of an oligopeptide.